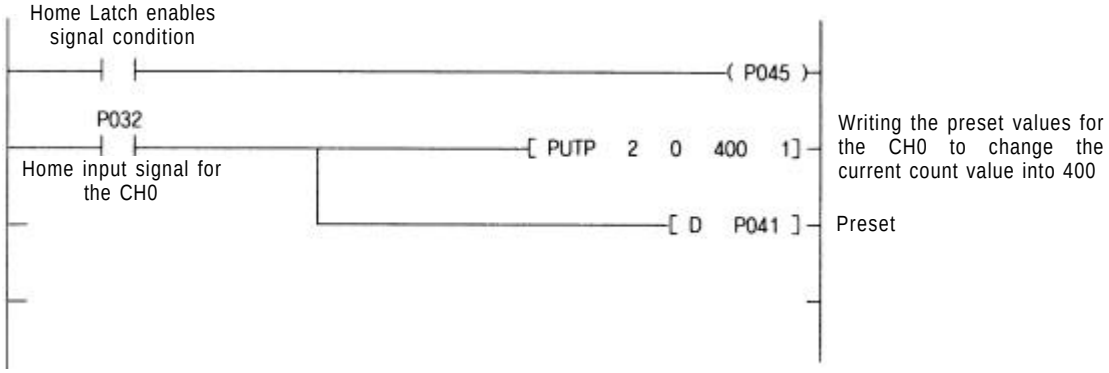
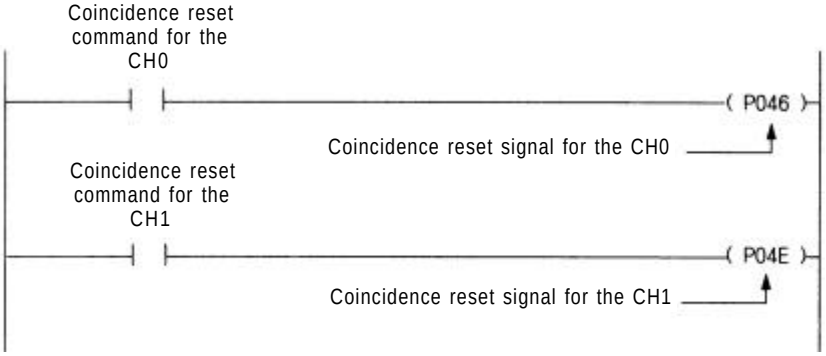
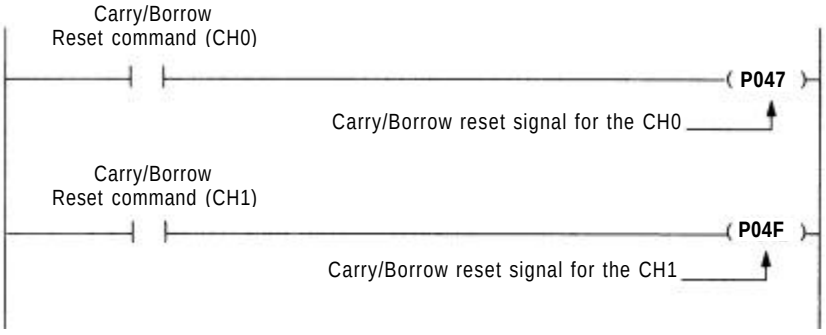
- **Setting Preset Value using the Home Input Signal**



7.2.7 Coincidence Reset



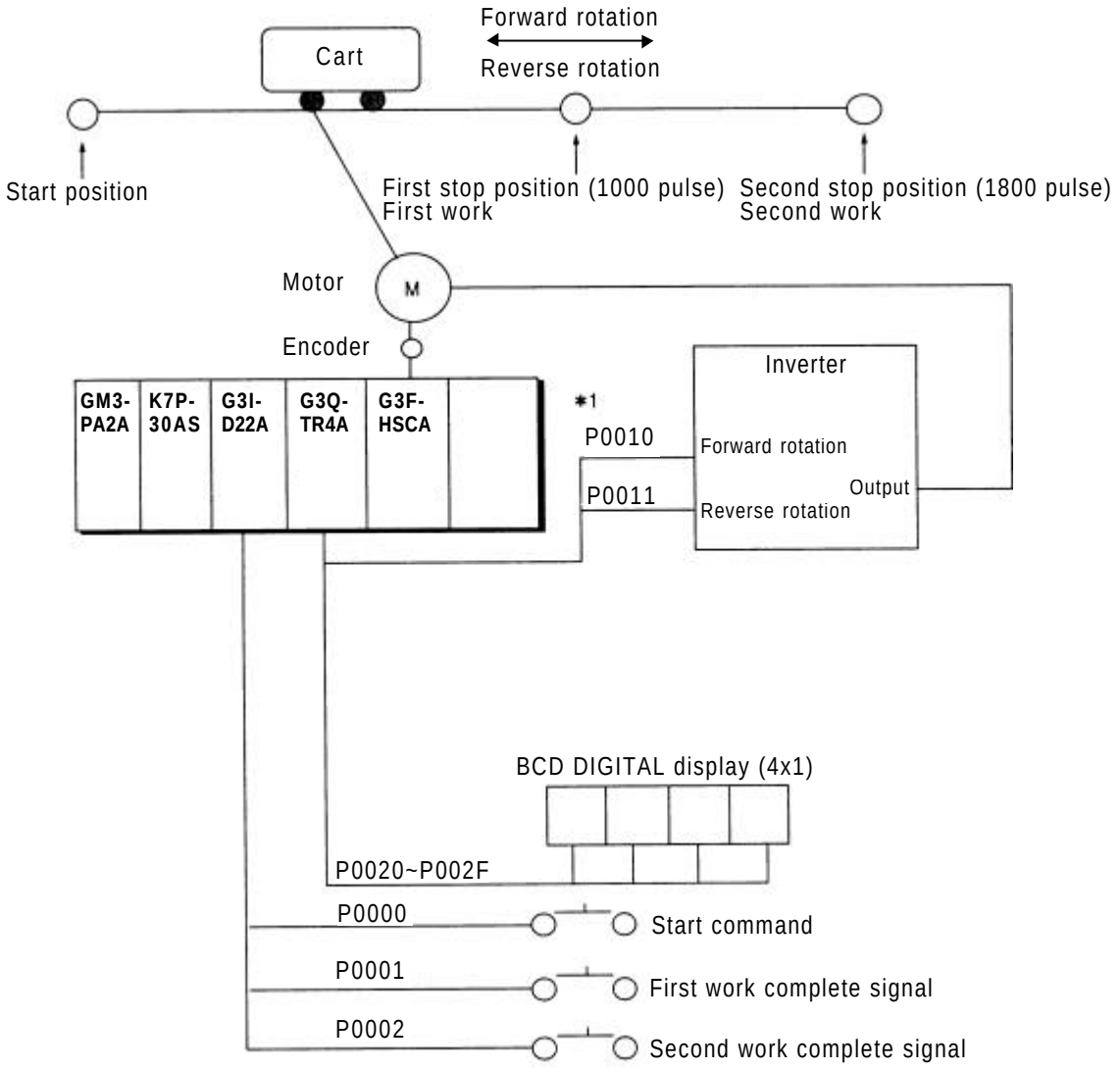
7.2.8 Carry/Borrow Reset



7.3 Application Examples

7.3.1 Program for moving the Cart

· **System Configuration**



K7P-30AS : MK 1000S CPU module

G3I-D22A : DC Input module (16 points)

G3Q-TR4A : TR Output module (32 points)

G3F-HSCA : High Speed Counter Module (32 points)

● **Operation explanation**

The motor for moving the cart rotates with start command, and makes the cart stop at the first stop position with the High Speed Counter Module counting the encoder signals from the motor.

Then, if the first work complete signal turns On, the motor moves the cart to stop at the second stop position. When the second work complete signal turns On, the motor return the cart to the start position.

● **Input/Output Signal Allocation**

P0000 : Start Command
P0001 : 1st Work Complete Signal
P0002 : 2nd Work Complete Signal
} Input

P0010 : Motor forward rotation signal (On : Forward rotation , Off : Stop)
P0011 : Motor reverse rotation Signal (On : Revese rotation, Off : Stop)
P0020 ~ P002F : Indicates the current count value(BCD) of the High Speed Counter Module.
} Output

P0030 ~ P003F : High-speed counter Input Signal

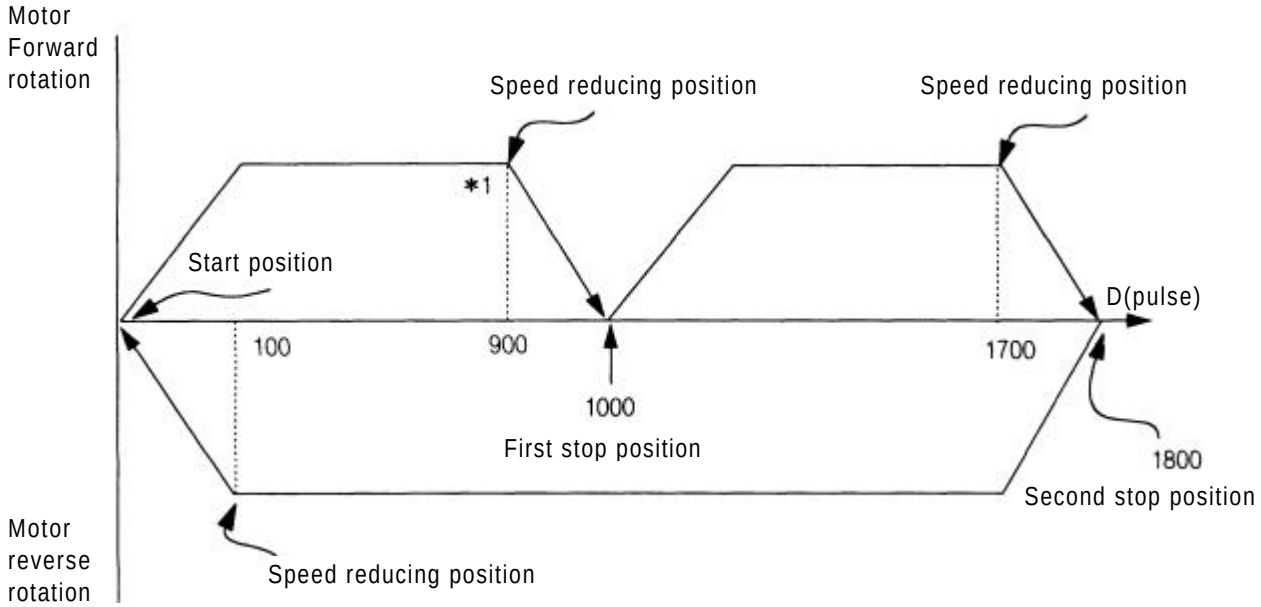
P0040 ~ P004F : High-speed counter Output Signal

● **D Register Allocation**

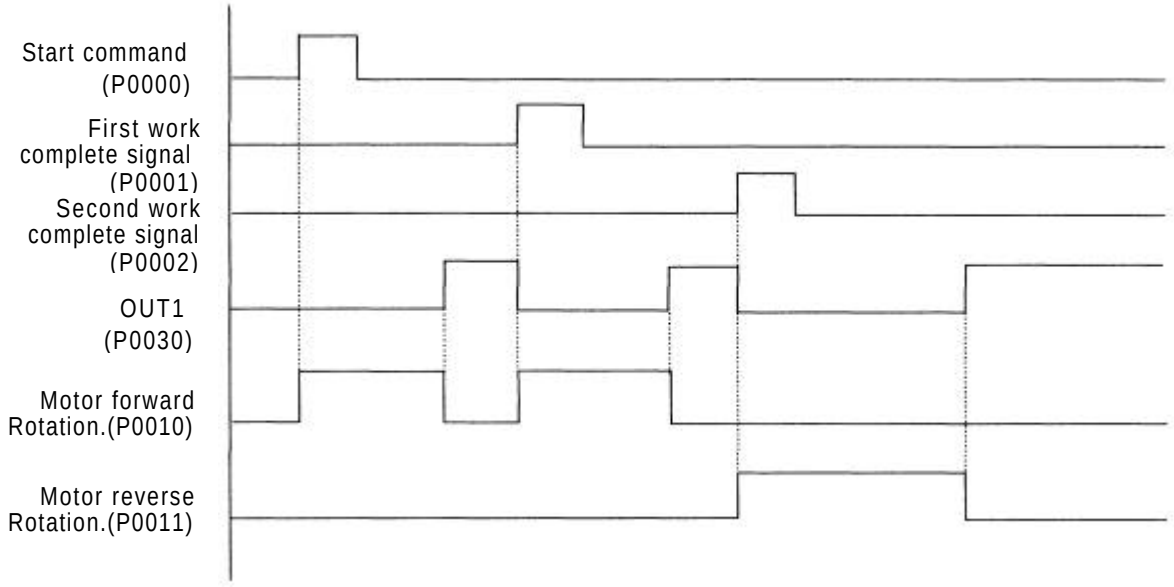
D0000 : High-speed counter Current count Value

●Operation pattern

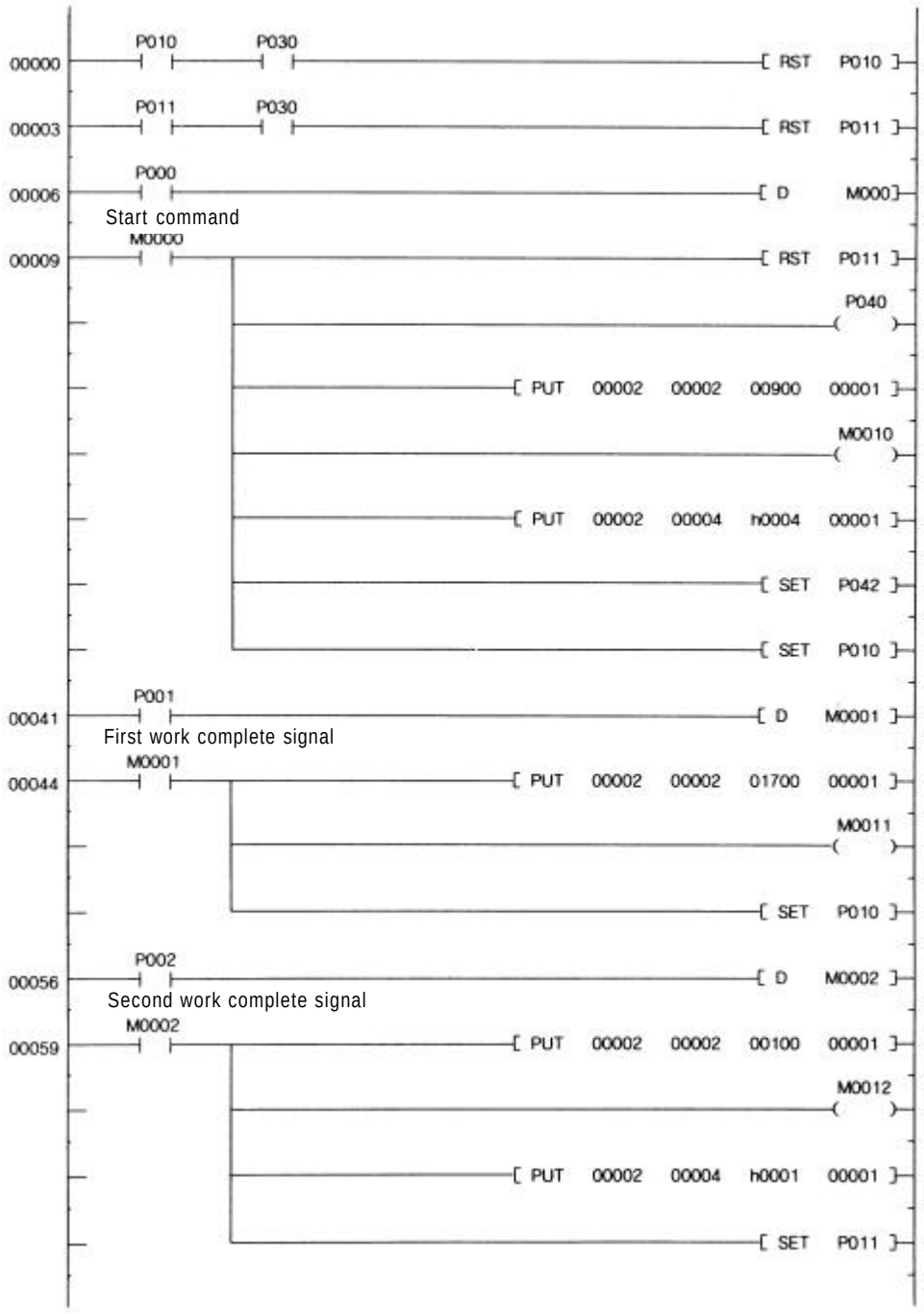
*1. 100(Difference between stop position and speed reducing position) is an interval delayed by reducing timing of the inverter

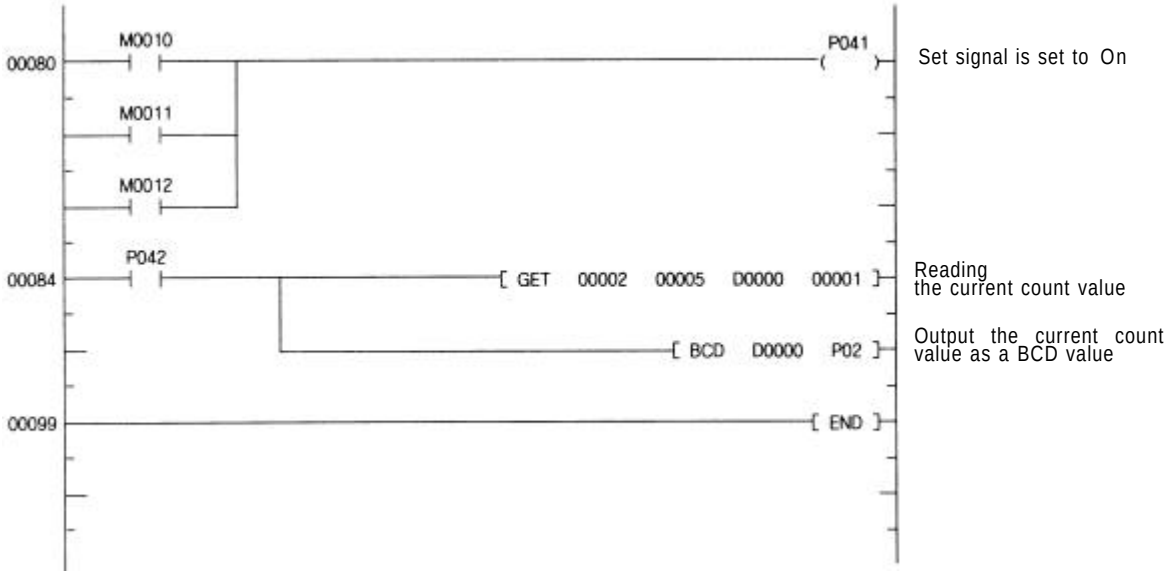


●Operation timing Diagram



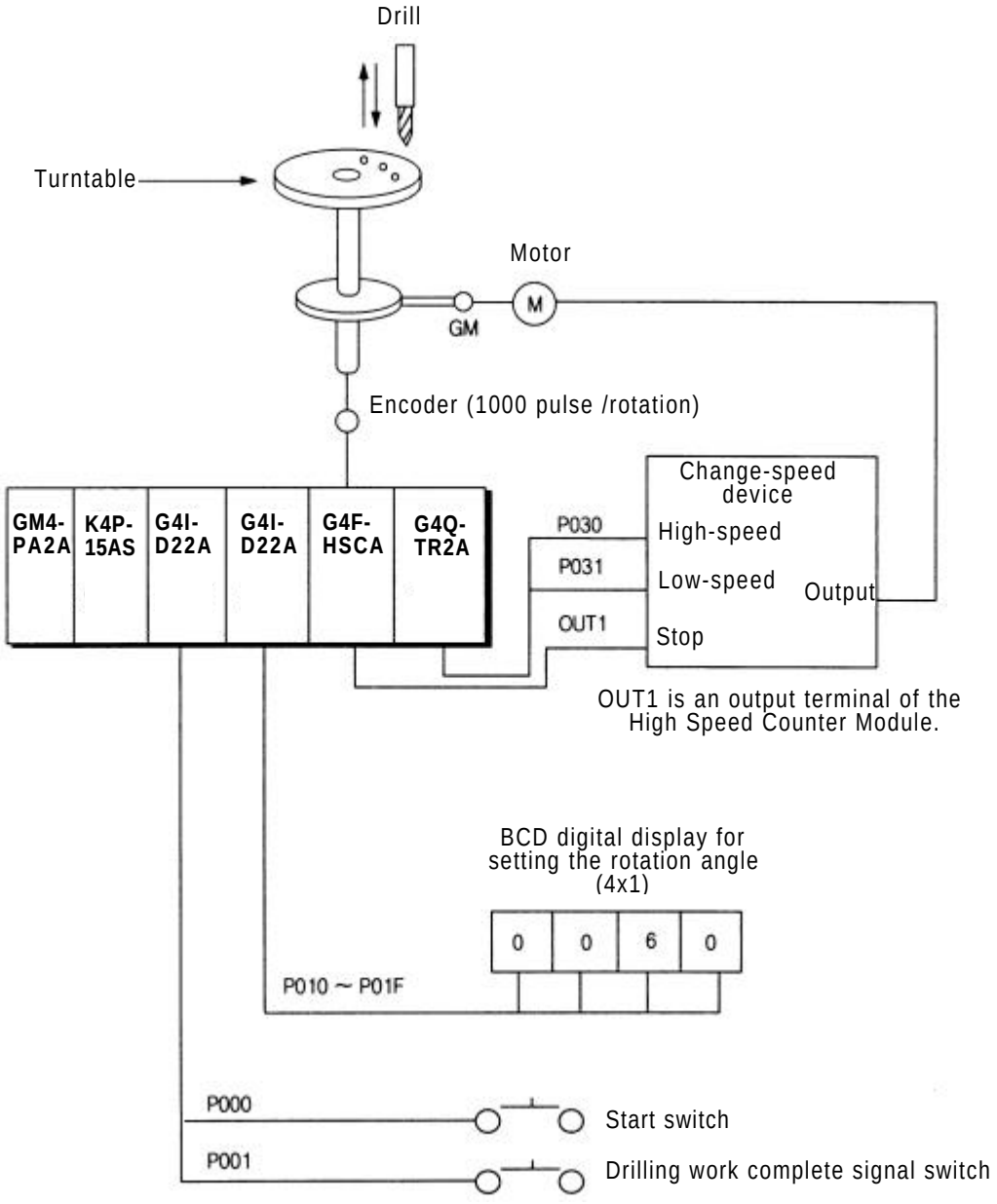
●Program


00000
P010
P030
[RST P010]
Forward rotation of the motor stops, when speed reducing position is over-passed
00003
P011
P030
[RST P011]
Reverse rotation of the motor stops, when speed reducing position is over-passed.
00006
P000
[D M000]
Start (Pulse)
Start command
00009
M0000
[RST P011]
Reverse rotation of the motor stops, when speed reducing position is over-passed
P040
Preset signal
[PUT 00002 00002 00900 00001]
Setting the speed reducing position for the first stop. Setting value=900
M0010
Set signal complementary output
[PUT 00002 00004 h0004 00001]
Out1 : ">"
[SET P042]
Operation Enable signal On
[SET P010]
Motor forward rotation signal
00041
P001
[D M0001]
First work complete signal
00044
M0001
[PUT 00002 00002 01700 00001]
Setting the speed reducing position for the second stop. Setting value=1700
M0011
Set signal complementary output
[SET P010]
Motor forward rotation signal
00056
P002
[D M0002]
Second work complete signal
00059
M0002
[PUT 00002 00002 00100 00001]
Setting the speed reducing position for stop at the start position. Setting value=100
M0012
Set signal complementary output
[PUT 00002 00004 h0001 00001]
Out1 : "<"
[SET P011]
Motor reverse rotation signal


00080
M0010
M0011
M0012
P041
Set signal is set to On
00084
P042
[GET 00002 00005 D0000 00001]
Reading
the current count value
[BCD D0000 P02]
Output the current count
value as a BCD value
00099
[END]

7.3.2 Program for Control of the Constant Angle rotation of the Turntable.

· **System Configuration**



K4P-15AS : MK 300S CPU Module

G4I-D22A : DC input Module (16 points)

G4F-HSCA : High speed counter Module (16 points)

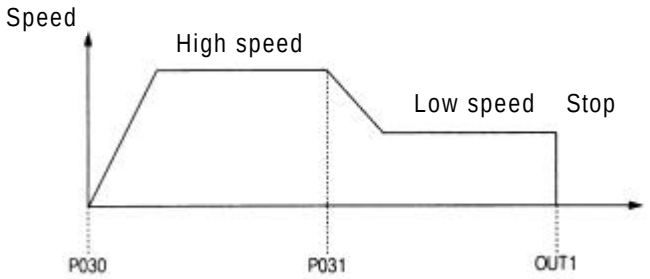
G4Q-TR2A : TR output Module (16 points)

· **Operation Description**

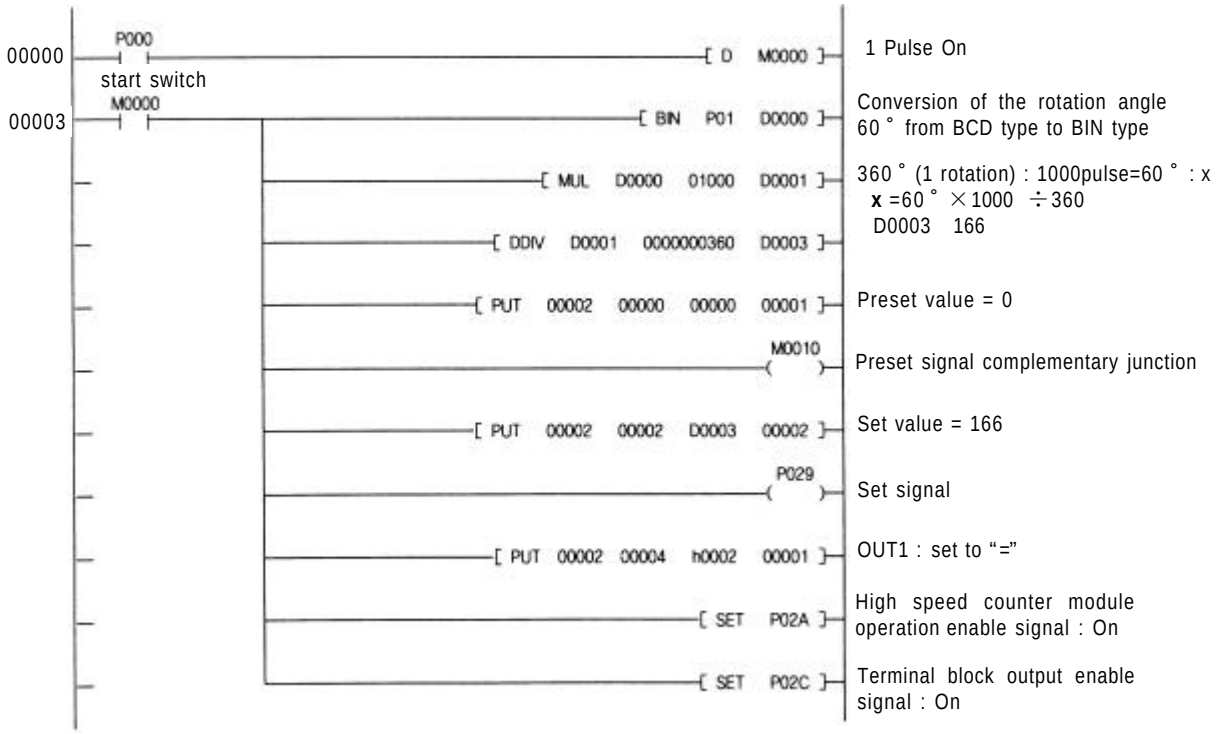
If the start switch is pushed, the turntable rotates as much as the rotation angle set (60 °) and completes drilling.

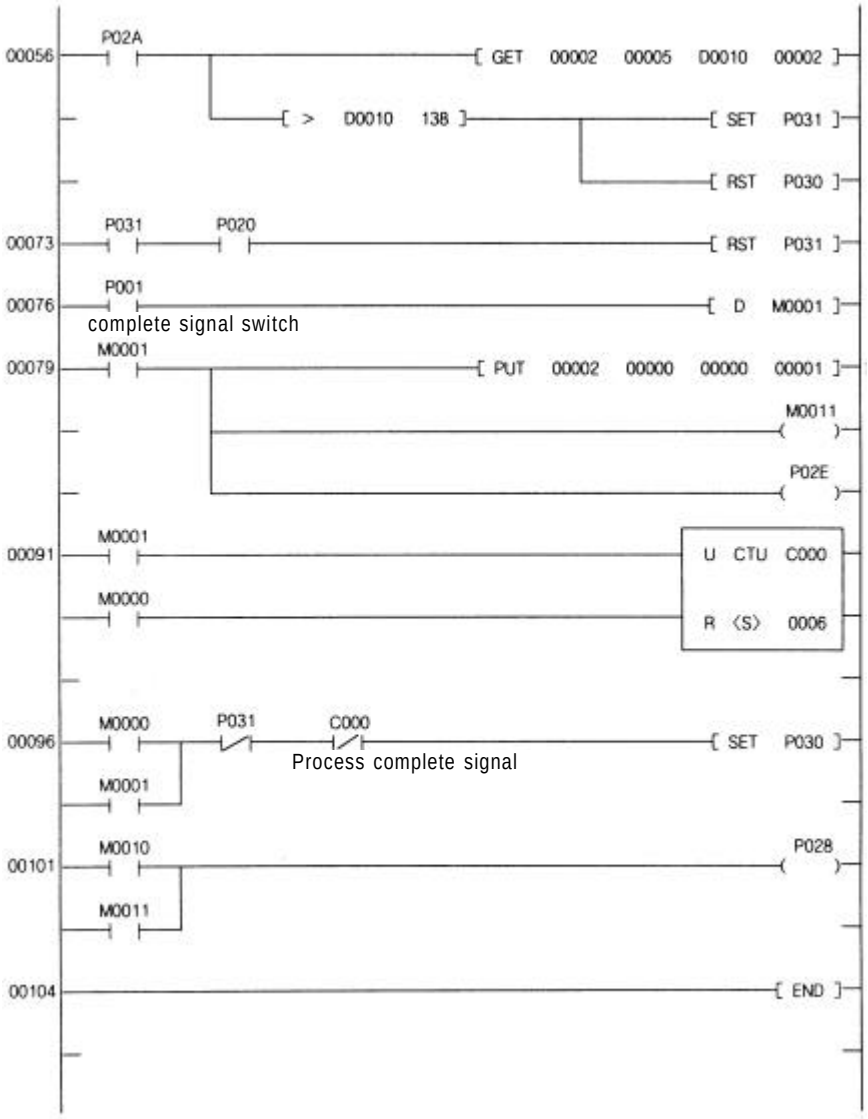
If the drilling work complete signal turns On, it rotates again 60 ° . If repeating the above operations has finished six drilling works, all processing will be finished.

· **Operation Format**



· **Program**





Reading the current count value of the high speed counter module to D0010 and D0011

If the turntable has rotated 138(50 °), then the low speed operation turns On

If the turntable has rotated 60 ° with low speed, it will be stopped by the coincidence signal ("=") of OUT1

Setting the Preset value to '0' to change the current count value into '0'.

Preset signal complementary contact

Coincidence reset signal turns On.

After the drilling work has been repeated six times, the processing complete signal (C000) turns On.

High-speed operation turns On.

Preset signal turns On.